

AMENDMENTS TO THE CLAIMS

Complete Listing of the Claims

1. (Twice Amended) An optical communication system having switch and add/drop nodes, characterized in that data packets sharing a common subnetwork destination are aggregated to form a photonic slot that is individually routed to reach said subnetwork destination; wherein:
 - (a) individual wavelength switching nodes (ISWN) provide switching of at least one wavelength within a timeslot without affecting other wavelengths;
 - (b) said ISWN separates the wavelength channels within a received photonic slot into individual component channels;
 - (c) said individual component channels being switched to an output port singly unless two or more have different wavelengths, in which case the channels are merged into one slot;
 - (d) all time division multiplex (TDM) repetitive frames are synchronized at input ports of said ISWN by utilizing synchronizing means such as fractional delays and the like; and
 - (e) said TDM frames being assigned bandwidths such that each connection is assigned a wavelength channel and a timeslot for routing from a source node to a destination node are switched and propagate through the system as optical bursts transmitted in waveslots having individual wavelengths of fixed duration and fixed positions in repetitive frames, whereby individual wavelengths in a particular time slot can be switched to different destinations.
2. (Canceled).

3. (Twice Amended) The optical communication system as defined in claim 1 2, wherein the data packets transmitted as optical bursts have rates lower than that of transmissions rates between nodes.
4. (Original) The optical communication system of claim 1, wherein the switch nodes are photonic and route a repetitive frame in its entirety between input and output ports of a switch node.
5. (Canceled).
6. (Original) The optical communication system of claim 3, wherein the switch nodes are photonic and route a repetitive frame in its entirety between input an output ports of a switch node.
7. (Canceled).
8. (Currently Amended) The optical communication system of claim 6 7, wherein a plurality of transmission media carry a plurality of waveslots having identical wavelengths and timeslots propagating on separate transmission media.